

Test Report No.:
FCC2022-0011-EMF

EMC Test Report

EUT : **Wireless Charging Battery**
MODEL : **A1610**
BRAND NAME : **anker**
APPLICANT : **Anker Innovations Limited**
Classification Of Test : **N/A**

CVC Testing Technology Co., Ltd.



CVC Testing Technology Co., Ltd.

Test Report No.: FCC2022-0011-EMF

Page 2 of 12

Applicant		Name : Anker Innovations Limited	
		Address : Room 1318-19, Hollywood Plaza, 610 Nathan Road, Mongkok, Kowloon, Hongkong	
Manufacturer		Name : Shenzhen Joway Power Supply Co., Ltd.	
		Address : 1-5/F of No.10 & No.11 Workshop of AnTuoShan High-Tech Industrial Park, Sha'Er Community, ShaJing Street, Bao'An District, Shenzhen, Guangdong, P. R. China.	
Equipment Under Test		Name : Wireless Charging Battery	
		Model/Type: A1610	
		Trade mark : anker	
		SerialNO.:N/A	
		Sampe NO.:2-1	
Date of Receipt.	2022.02.18	Date of Testing	2022.02.22-2022.03.08
Test Specification		Test Result	
47 CFR PART 1, Subpart I, Section 1.1310 KDB 680106 D01 RSS-102 Issue 5+A1(2021-02) SPR-002 Issue 1(2016-09)		PASS	
Evaluation of Test Result	The equipment under test was found to comply with the requirements of the standards applied.		
	Issue Date: 2022.03.11		
Tested by:	Reviewed by:	Approved by:	
Xu ZhenFei Name Signature	Liu YongHai Name Signature	Chen HuaWen Name Signature	
Other Aspects: NONE.			
Abbreviations:OK, Pass= passed Fail = failed N/A= not applicable EUT= equipment, sample(s) under tested			
This test report relates only to the EUT, and shall not be reproduced except in full, without written approval of CVC.			



TABLE OF CONTENTS

RELEASE CONTROL RECORD	4
1. CERTIFICATION	5
2. GENERAL INFORMATION	6
2.1 DESCRIPTION OF SUPPORTED UNITS	6
2.2 TEST LOCATION	6
3. RF EXPOSURE TEST	7
3.1 TEST SPECIFICATIONS	7
3.2 LIMIT	7
3.3 EUT CONFIGURATION AND ENVIRONMENT DETAIL	8
3.4 TEST RESULTS	8
4. PHOTOGRAPHS OF TEST SETUP	10
APPENDIX A	11



RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
FCC2022-0011-EMF	Original release	2022.03.11



1. CERTIFICATION

FCC ID	2AOKB-A1610A
IC ID	23451-A1610A
PRODUCT	Wireless Charging Battery
BRAND	anker
MODEL	A1610
HVIN	A1610A
ADDITIONAL MODEL	N/A
APPLICANT	Anker Innovations Limited
STANDARDS	47 CFR PART 1, Subpart I, Section 1.1310, RSS-102 Issue
	5+A1(2021-02),SPR-002 Issue 1(2016-09)
	KDB 680106 D01
Remark:	
1. For more detailed features description, please refer to the manufacturer's specifications or the User's Manual.	
2. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.	
3. Please refer to the EUT photo document for detailed EUT photo.	



2. GENERAL INFORMATION

2.1 DESCRIPTION OF SUPPORTED UNITS

The EUT has been tested with associated equipment below

Description	Manufacturer	Model No.	Serial No.
Wireless charging load	/	15W	/

2.2 TEST LOCATION

The tests and measurements refer to this report were performed by EMC testing Lab. of CVC Testing Technology Co., Ltd.

Address: No.3,TiantaiyiRoad,KaitaiAvenue,ScienceCity,Guangzhou,China

Post Code: 510663 Tel: 020-32293888

FAX: 020-32293889 E-mail: office@cvc.org.cn

Test Firm Registration Number: 937273

CN Number: 26239 Wireless Test Site Registration Number: CN0103



3. RF EXPOSURE TEST

3.1 TEST SPECIFICATIONS

Test Requirement:	47 CFR PART 1, Subpart I, Section 1.1310 RSS-102 Issue 5+A1(2021-02) SPR-002 Issue 1(2016-09)
Measurement Distance:	15cm
Test voltage:	DC 5V from Adapter input AC 120V/60Hz

3.2 LIMIT

Limits of Test Standard 47 CFR PART 1, Subpart I, Section 1.1310

Frequency range(MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f ²)	6
30-300	61.4	0.163	1.0	6
300-1500	/	/	f/300	6
1500-100.000	/	/	5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f ²)	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	f/1500	30
1500-100.000	/	/	1.0	30

F=frequency in MHz

*=Plane-wave equivalent power density

RF exposure compliance will need to be determined with respect to 1.1307(c) and (d) of the FCC rules. The emissions should be within the limits at 300kHz in Table 1 of 1.1310(use the 300kHz limits for 150kHz:614V/m,1.63A/m).

Limits of Test Standard RSS-102 Issue 5+A1(2021-02), SPR-002 Issue 1(2016-09)



Table 4: RF Field Strength Limits for Devices Used by the General Public (Uncontrolled Environment)

Frequency Range (MHz)	Electric Field (V/m rms)	Magnetic Field (A/m rms)	Power Density (W/m ²)	Reference Period (minutes)
0.003-10 ²¹	83	90	-	Instantaneous*
0.1-10	-	0.73/ <i>f</i>	-	6**
1.1-10	87/ <i>f</i> ^{0.5}	-	-	6**
10-20	27.46	0.0728	2	6
20-48	58.07/ <i>f</i> ^{0.25}	0.1540/ <i>f</i> ^{0.25}	8.944/ <i>f</i> ^{0.5}	6
48-300	22.06	0.05852	1.291	6
300-6000	3.142 <i>f</i> ^{0.3417}	0.008335 <i>f</i> ^{0.3417}	0.02619 <i>f</i> ^{0.6834}	6
6000-15000	61.4	0.163	10	6
15000-150000	61.4	0.163	10	616000/ <i>f</i> ^{1.2}
150000-300000	0.158 <i>f</i> ^{0.5}	4.21 x 10 ⁻⁴ <i>f</i> ^{0.5}	6.67 x 10 ⁻⁵ <i>f</i>	616000/ <i>f</i> ^{1.2}

Note: *f* is frequency in MHz.
 *Based on nerve stimulation (NS).
 ** Based on specific absorption rate (SAR).

3.3 EUT CONFIGURATION AND ENVIRONMENT DETAIL

Operating Environment:

Temperature: 24.0°C Humidity: 52% RH Atmospheric Pressure: 1015 mbar

3.4 TEST RESULTS

RESULTS UNDER Test Standard 47 CFR PART 1, Subpart I, Section 1.1310

Electric Field Emissions

Test Position	Test Distance (cm)	Probe Measure Result (V/m)	Limit (V/m)
Side 1	15	0.40	614
Side 2	15	0.39	614
Side 3	15	0.38	614
Side 4	15	0.36	614
Top	15	0.36	614
Bottom	15	0.37	614

Magnetic Field Emissions

Test Position	Test Distance (cm)	Probe Measure Result (A/m)	Limit (A/m)
Side 1	15	0.039	1.63
Side 2	15	0.050	1.63
Side 3	15	0.042	1.63
Side 4	15	0.044	1.63
Top	15	0.075	1.63
Bottom	15	0.050	1.63

Note: All modes have been tested and we only record the worst test result in full load mode.



RESULTS UNDER Test Standard RSS-102 Issue 5+A1(2021-02), SPR-002 Issue 1(2016-09)

Electric Field Emissions

Test Position	Test Distance (cm)	Probe Measure Result (V/m)	Limit (V/m)
Side 1	10	0.79	83
Side 2	10	0.83	83
Side 3	10	0.79	83
Side 4	10	0.73	83
Top	10	0.72	83
Bottom	10	0.73	83

Magnetic Field Emissions

Test Position	Test Distance (cm)	Probe Measure Result (A/m)	Limit (A/m)
Side 1	10	0.047	90
Side 2	10	0.074	90
Side 3	10	0.052	90
Side 4	10	0.052	90
Top	10	0.052	90
Bottom	10	0.058	90

Note: All modes have been tested and we only record the worst test result in full load mode.

4. CLASSIFICATION

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. So, this device is classified as **Mobile Device**.

(1) Power transfer frequency is less than 1 MHz ?

Answer: The EUT Power transfer frequency is 110-148KHz.conform.

(2) Output power from each primary coil is less than or equal to 15 watts ?

Answer: The EUT Output power is 15W.conform.

(3) The system may consist of more than one source primary coils, charging one or more clients. If more than one primary coil is present, the coil pairs may be powered on at the same time?

Answer: The transfer system includes only single primary coils.conform.

(4) Client device is placed directly in contact with the transmitter?

Answer: Client device is placed directly in contact with the transmitter, conform

(5) Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion).

Answer: conform

(6) The aggregate H-field strengths anywhere at or beyond 15 cm surrounding the device, and 20 cm away from the surface from all coils that by design can simultaneously transmit, and while those coils are simultaneously energized, are demonstrated to be less than 50% of the applicable MPE limit.

Answer: Conform.Please refer to RF Exposure

5. PHOTOGRAPHS OF TEST SETUP



TEST DISTANCE 15cm



TEST DISTANCE 10cm



Appendix A

RF EXPOSURE Test				
Equipment	Model No.	Serial Number	Manufacturer	Cal. Due
Electromagnetic radiation tester	SEM-600	D-1437	STT	2022/4/25



Important

- (1) The test report is valid with the official seal of the laboratory and the signatures of Test engineer, Author and Reviewer simultaneously.
- (2) The test report is invalid if altered.
- (3) Any photocopies or part photocopies in the test report are forbidden without the written permission from the laboratory.
- (4) Objections to the test report must be submitted to the laboratory within 15 days.
- (5) Generally, commission test is responsible for the tested samples only.

Address of the laboratory:

CVC Testing Technology Co., Ltd.

Address: No.3, Tiantaiyi Road, Kaitai Avenue, Science City, Guangzhou, China

Post Code: 510663

Tel: 020-32293888

FAX: 020-32293889

E-mail: office@cvc.org.cn